# Cloning in the media and popular culture

Media

This essay deals with the issues raised in the media by the rapid technological developments of cloning and in particular on the religious beliefs of the uniqueness of life. It will also touch upon the ethical and legal issues brought about through out the development of cloning. 1A clone is a group of genetically identical organisms. Identical twins are therefore a clone since both come form one fertilised egg that is divided into two genetically identical cells that then separate.

In the process of mammalian cloning there are two processes. Nuclear Transfer is where the nucleus is removed from the unfertilised egg cell; this eliminates all its genetic information. The cell nucleus of the individual being cloned is introduced into the enucleated egg cell though cell fusion. If this is done in the right conditions, the egg cell then begins to divide and go through a process of foetal developments as if it had been fertilised normally. The other process is artificial twinning which is a process of splitting the embryo into two or more embryos.

First an egg cell is fertilised by sperm, then left to grow into an embryo. The embryo is split into two or more embryos when it is still in the early stage of development. The split embryo are nurtured into new embryos, all genetically identical, then implanted into the surrogate mother to grow. This is not the same as nuclear transfer as the born animal has biological parents and is a clone of its brothers and sisters.

Cloning of mammals has proven to be difficult and has only developed in the past few years through a long line of research. 3In 1997 came the most famous sheep of all Dolly who was cloned using a cell from an adult sheep.

She represented a new departure because she was the first mammal to have been cloned using a nucleus taken from an adult sheep. She possessed a genetic code identical to that of her original parents. This breakthrough raised the possibility of cloning adult mammals rather than embryos.

However it is not known yet whether nuclear transfer will be possible in the process of cloning humans. Most future cloning developments will not even concern the reproduction of humans but it will focus on using cloning to understand cell development, heredity and genetic structure. For example cloning research may contribute to disease treatment by allowing scientists to reprogram cells. Through research, skin cells could be reprogrammed into insulin producing cells in the pancreas.

These skin cells would then be introduced into the pancreas of thediabetespatients, allowing them to produce insulin. 4However a number of other applications has been envisaged. It could be used in future research in which cloning may be beneficial, such as encouraging research into cloned tissues to work with the basic building blocks of life 'the stem cells' and discovering how to reprogramme them in such away that they will develop into the tissue that is needed such as skin or heart muscle or nerve cells.

These stem cells can be acquired from the foetus which has miscarried or been aborted. In order to obtain these stem cells which are genetically identical to the suffer, it is necessary to use the cloning technique, taking the nucleus of a cell from the affected person and putting it into a human egg, from which the nucleus has been removed. This is the creation of life; it is genetically identical to the person who is suffering.

After just a few days of cell division, the stem cells would be removed from the embryo and then the embryo would be destroyed, this would give you a cell line which would never be human but would be used for producing identical tissue for a patient who needs a supply of cells or tissue for grafting, such as replacing heart muscle tissue which would offer hope for people with heart disease, or brain tissue which would help suffers of Alzheimer's.

However many of these future applications of cloning involve the creation of embryo solely as a source of cells and destroying them. In an article by Roger Highfieldscienceeditor of The Daily Telegraph raises the ethical question, does the 100 cell early embryo that will be used in the stem cell research count as a person? That is the question at the heart of the debate. At one extreme, pro-life groups, the Catholic Church and some other religious organisations argue that the embryo becomes ahuman beingas soon as an egg is fertilised, and should be accorded the samerespectas a baby. However, as stated by Roger Highfield in the Sunday Telegraph 2002 the Christian tradition has not always granted this moral status to the early embryo.

For many centuries it was believed that the human soul did not enter the embryo until 40 days after conception in the case of a man, and 90 days after conception in the case of a woman. This distinction only ended in 1869 when Pope Pius IX declared that women who had survived anabortionwere to be excommunicated implying that a person was 'ensouled' at conception. Highfield believes those at the other extreme of the debate claim that a very

early embryo is no more than a collection of undifferentiated cells and deserves little more attention that any other isolated human cell or tissue.

The fact that the embryo has the potential to become a person does not they say accord it the rights of a person. They also say the view that the embryo is a person from the moment of conception does not match most people's idea of human personal identity. The Warnock committee concluded that the early embryo has special status but not one that justifies its absolute protection. One of the arguments used by the modern media against developing embryonic stem cells is the same for cloning whole animals.

As it could be argued that once scientists have done this there would be no stopping them from going on to develop a human clone. If once the first step is taken it might seem inevitable that the next step should follow. Therefore is it wrong to let the first step take place? As Mary Warnock suggests in her article on stem cell research from the Dialogue journal is our fear of genetic manipulation different in kind from other fears? Many fears of new discoveries have been fears of supposed risks. This was the case when people feared steam engines or internal combustion engine.

And we have on whole become a risk averse society, we think of minimising risks as human nature. The issue poses the question of how cloning maybe beneficial as well as morally wrong. The people against cloning feel it is an affront to religious sensibilities; it seems like playing God and interfering with the natural process. There are other objections too like they are worried that cloning appears to be a powerful force that can be exploited to produce horrendous results like creating a population entirely the same. One of the

main ethical concerns brought up by the media is the possibility of the psychological impact on the offspring. Would the human clone have a diminished sense of individuality? Perhaps human clones would think that they were genetically destined to the same fate as the person from whom their donor cells came. 7Ethical questions have been raised about how cloning could also control the children's genotypes, which could be practised in discriminatory ways.

As the author Peter Paris expressed in the Ethics of Human Cloning that parents could use cloning as genetic manipulation along with other techniques to exercise the quality control over their children, or perhaps scientists may use it with racist intent a fear raised by Peter Paris,' Since Europeans, and euro Americans have never been able to affirm the value of the worlds darker races as equals, there is little reason to believe that their scientists would not seek to rid the world of some of its racial diversity by combining science of eugenic with that of human cloning,.

From this there could be a reduction in genetic variability, for producing many clones runs the risk of creating a population entirely the same. The population would be susceptible to the same diseases and one disease could devastate the entire population. Too this lends support to old prejudices and it could also raise new ones which cut across existing social divisions. In the modern media supporters of cloning consider that with careful continuation of research, the technological benefits of cloning clearly outweigh the possible social consequences.

In their minds, the final products of cloning, like farm animals and laboratory mice will not be the most important achievement. The applications of cloning the envision are not nightmarish and inhumane, but will improve the overall quality of science and life. Cloning will help to produce discoveries that will affect the study of genetics, cell development, human growth, and obstetrics. Also the people who argue in favour of cloning believe that much of the concerns are based on misunderstandings.

They believe cloning in reality would produce what amounts to a delayed identical twin, several years or even decades younger than that person who is being cloned. Identical twins are separate individuals. They look different because of different preferences, clothing and hairstyle. They even have different moral values, academicachievements and tastes inmusic. As many identical twins through their lives develop unique identities of their own. Another misunderstanding is how genes influence an individual's development. Human beings do not inherit a fixed unchangeable genetic blueprint from their parents.

Scientists believe it's an interaction between genes and theenvironmentin which an individual grows up and lives including the environment in which the foetus is in the womb. 8One of the major reasons people fear cloning is based religious reasons on the notion that a clone is an imperfect imitation of the real thing, which causes some people to think that far from having the same soul as someone else a clone would have no soul at all. In the book Remaking Eden it was stated that the Irvine, California, rabbi Bernard King was seriously frightened by this idea when he asked, 'Can the cloning process create a soul?

Can scientists create the soul that would make a being ethical, moral, caring, loving, all the things we attribute humanity to? '. The Catholic Father Saunders suggested that, 'Cloning would only produce humanoids or androids-soulless replicas of human beings that could be used as slaves. ' However there is nothing artificial about the cells used in cloning. They are alive all through the cloning process. The newly formed embryo can only develop inside the womb of a woman in the same way embryo and foetuses develop.

Cloned children will be proper human beings thus the notion of soulless clone has no basis in reality. 9Though the fundamental ethical concern is something for which Christian theology provides some insights. Neil Messer suggests that the act of cloning can go against many people's moral and religious beliefs. The bible is an important part of any Christian's life and it contains the teachings of God and his views on life. In genesis he talks of the creating of earth where on the fifth day:

'God created man in his image: in the image of God he created him; male and female he created them. Genesis 1v27. Human beings are made in the image of God. This bestows on them unique status in creation to treat them, not as manipulated, is to violate Gods given nature. Should we be going against him and creating humans to our specifications? Or is this what God would have wanted? Many strong Christians would disagree with pre-cloners saying that God made man and we should not be tampering with God and his creations, we are finite and limited creatures, we are mortals rather than God, and it is both foolish and self destructive for us to forget that.

Whilst many would answer with arguments that if God had not wanted this then he would not have let humans progress so far, like genesis 11 we find human beings use there God given skill and ingenuity to try and reach up to heavens, to make a name for themselves in efforts to become like God ' Come let us build ourselves a city a tower that reaches the heavens, so that we may make a name for themselves and not be scattered over the face of the earth' Genesis 11v3.

In this man is using Gods given ability to push back out limits to take some measure of control and authority over created order and share in Gods creative work. This was seen as an arrogant use of that skill and ingenuity to pretend that we have no limits, that we are Gods. However God has given us freewill and to exercise this freewill would mean consequently God cannot be held responsible. 10Also in Bioethics a primer for Christian Gilbert Milander believed Christians would also see cloning as a violation to the uniqueness of human life, which God has given to each person and to no one else.

Christians are given their individualism uniqueness in the ritual of baptism. In baptism God sets his hand upon them calls them by name and thereby establishes their unique individual identity and destiny. Their uniqueness is not a personal achievement or power it is established in community with God when they realise that they can not directly control their destiny but when they admit that life is grounded and sustained by God. 11Nevertheless from the earliest time of humanculturewe have been co-creators with God.

We have taken the things around us including our own bodies and brains and reorganized them into a number of different ways. We can ask ourselves the

question is there anything that can be excluded from the touch of the human hand and the initiative of the human brain Even now we have discovered that life itself can be tampered with. Which shows us that we are co creators with God and we can shape life anyway we desire. 12Consequently can we Christians accept their positions as co-creators or would this be seen as blasphemy?

Although the fact remains that humans have been given such power without the knowledge and understanding of God, which means the moral issue then becomes whether we will use our power responsibly. What wrong things might we create with the power of life? Will we be able to watch someone die knowing we are able to create replicas of them? Will we deny our human weakness and try and stop the process of aging by replacing aging parts of our body? Will we worship physical strength and create a society where only those people live and make false images of human life selected by our own preferences.

The media has now made us aware that the possibility of cloning humans is only a few years away. Though Cloning has offered us an insight into the power of creation that humanity has done. A Christian could come to the analysis that humans are co creators with God, that we are ever moving closer to making babies rather than having babies. The media and religious organisations believe Cloning represents a test of human restraint wisdom and technological developments and in many ways identifies genetic engineering as one of the most moral problems of the 21st century.

Epilogue The media provides us with information that the science of cloning continues to evolve at a rapid pace, and medical advancements based on this science will continue to provide new ethical and religious challenges. As Dr Michael West said on a radio4 Today programme when interviewed by John Humphry's 'The Use of stem cell research for the relief of disease, Parkinson's, Cystic thybrosis will prove to be irresistible but not for human cloning, Literature Review

I have many books written about the ethical debate surrounding cloning all of which are in the light of the recent developments of cloning and sets out the modern debate and the Medias views of cloning as well as the theological issues. The books seem quite useful all giving different viewpoints on the subject and they all seem to have been written quite recently as cloning is a new issue and first explored in March 1997 when Dolly the first cloned mammal was born. There are journals which consist of the moral debate of cloning hence I will be able to get hold of up to date information and the view ethicists in this area.

The Ethics of Human Cloning Neil Messer 2001 With all the recent events and research of cloning this booklet sets out the debate of cloning it explains the technical terms clearly and draws out the theological issues and shows what Christians have to contribute to the discussion of Cloning. 2 Clone The Road to Dolly and The Path Ahead 1998 This book puts the science and ethics into context and discusses what part of cloning may play in the future of this medical research and human race. The book also considers theethical dilemmathat maybe used to clone human.

Also the book touches on how news on scientific journals reach the popular media. 3. Remaking Eden Cloning and Beyond 1999 This book explores the science of embryology touching down on cloning and the new world of baby making , it explains what science can do and will be able to do. 4. Flesh of my flesh, the ethics of Human cloning This book contains a collection of articles from scientists, philosophers, bioethists and theologians debating whether cloning should be allowed , it also examines up to date laws on cloning and different legal points of views.